Nashville Area Metropolitan Planning Organization Tri-County Transportation & Land Use Study of Robertson, Sumner, Wilson Counties

Steering Committee Meeting September 16, 2010



LandDesign • Kimley-Horn & Associates, Inc.

Basile Baumann Prost Cole & Associates, Inc. • Sterling Communications

Agenda



- Update on Overall Progress
- Review Regional Growth Scenarios
 - Business as Usual (BAU) Growth Scenario
 - Alternative Scenarios ("Centers" and "Centers & Corridors")
 - Preferred Alternative Scenario
- Discuss Strategic Corridors & Development
 Form Focus Areas
- Implementation Strategies & Toolbox
- Next Steps

state Highway

- Prepare Conceptual Regional Transportation Network
- Revise Study Report per Today's Input
- Finalize Recommendations and Report

Purpose of the Meeting



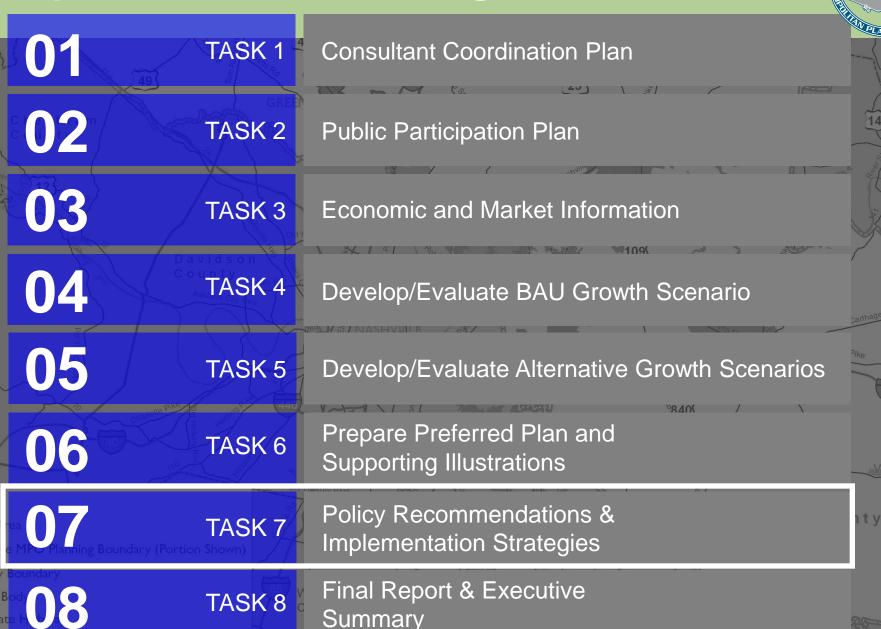
- Affirm Preferred Alternative Regional Growth
 Scenario
 - Discuss concepts, policies, and tools to link transportation planning with land-use planning.
 - Establish direction for final report.

y Area nville MPO Planning Boundary (Portion Shown) nty Boundary

er Body state Highway Wilson County



Update on Overall Progress





Tri-County Regional Growth Scenarios



- Compare and model regional growth scenarios.
- Construct "Business-as-Usual" Scenario as baseline.
- Introduce and model BAU and alternative scenarios for consistency with regional goals.
- Develop "Preferred Alternative Scenario" through local input.

Wilson County

nville MPO Planning Boundary (Portion Shown)

nty Boundary

state Highway

Business as Usual (BAU)



- Reflects continuation of plans, policies, and programs for land use and development form
 - Constructed with "Character Areas"
 - Character Areas represent areas planned or zoned within similar parameters for use, intensity, form, and pattern of land development

nville MPO Planning Boundary (Portion Shown)

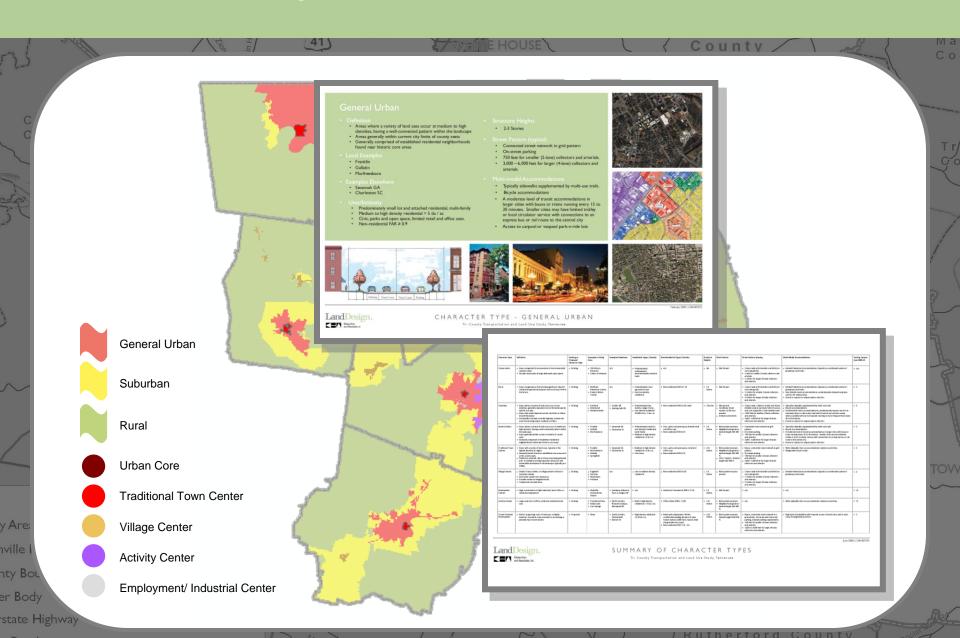
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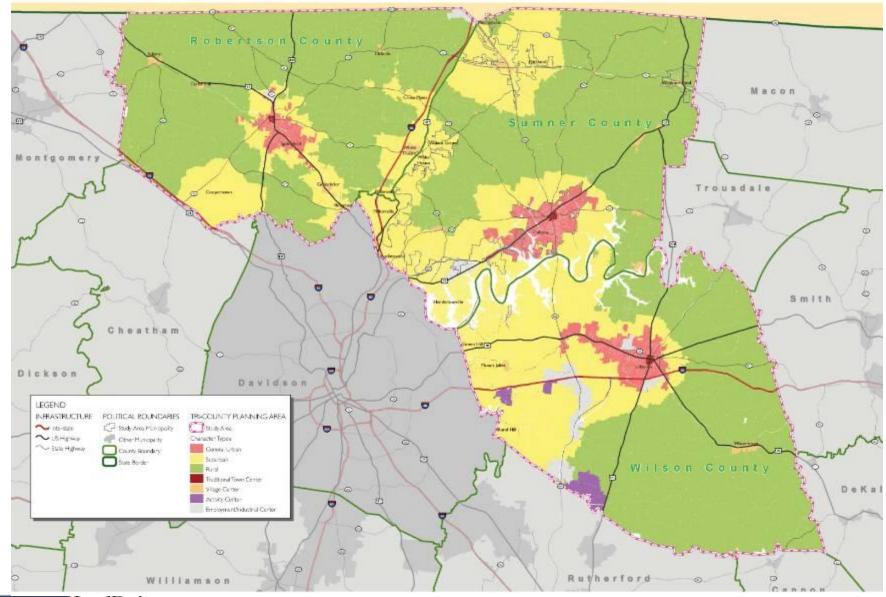
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Growth Policy

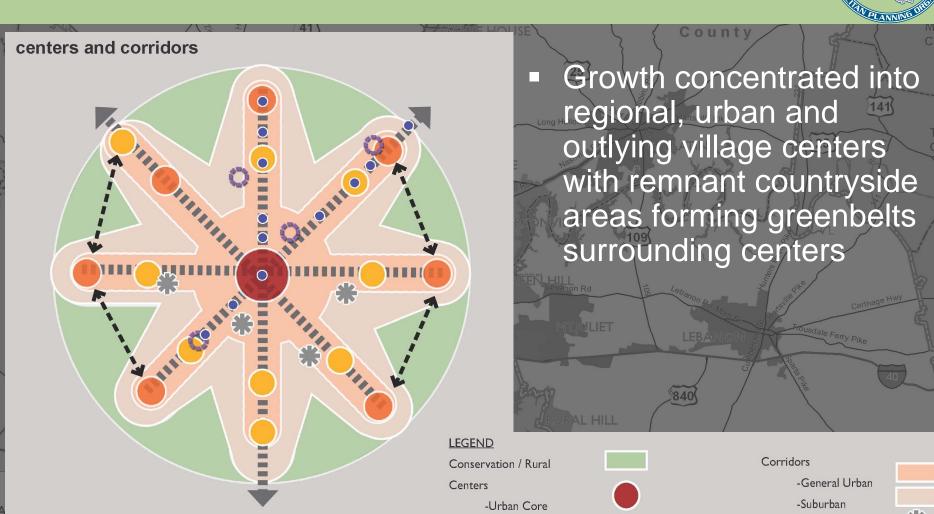






Centers and Corridors





-Traditional Town Centers

-Village Centers

-TOD

state Highway

Williamson' County Special Use

Rutherford County

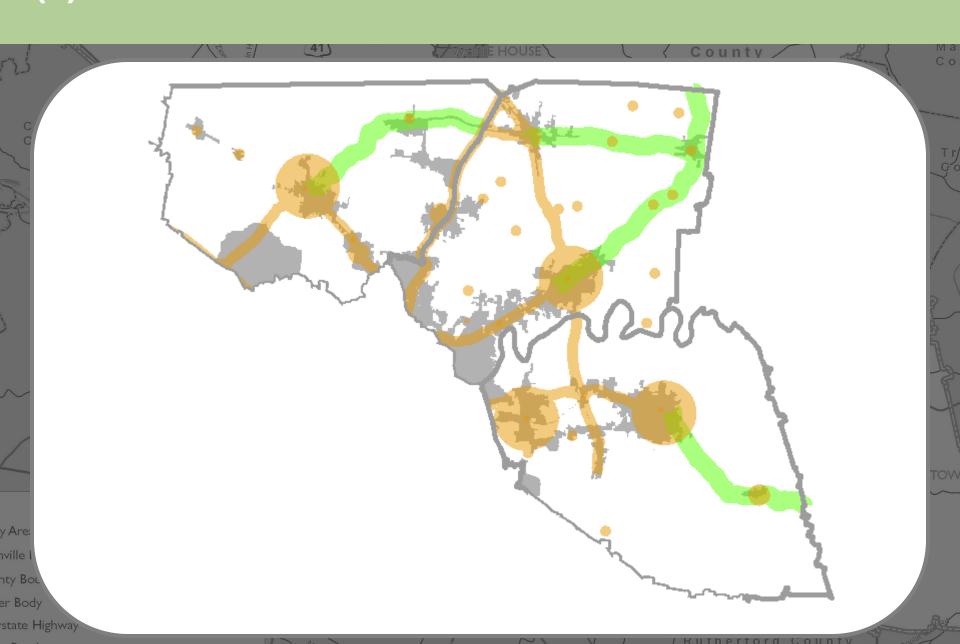
Special Activity Centers

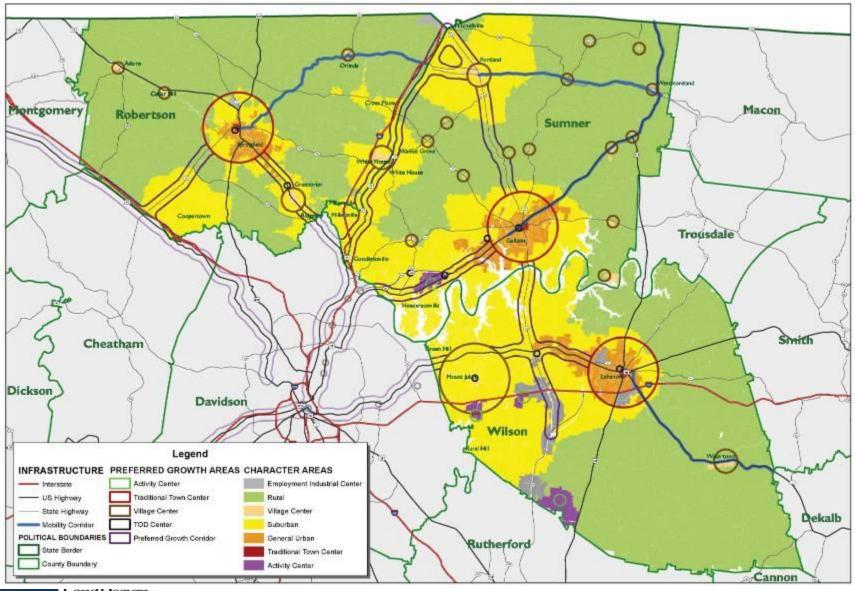
Primary Linkages

Secondary Linkages



(1) Centers & Corridors: Preferred Growth Areas



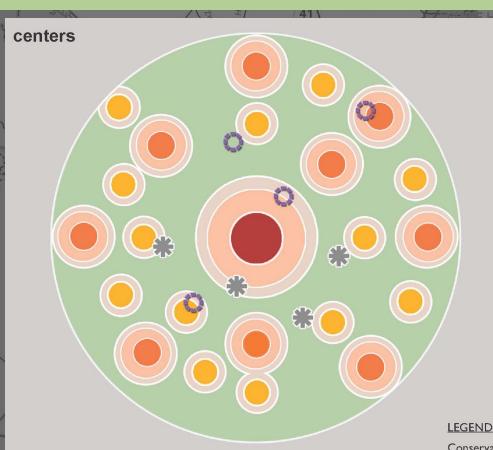




ALTERNATIVE SCENARIO 1: CENTERS & CORRIDORS

Centers





Growth concentrated into regional, urban and outlying village centers with remnant countryside areas forming greenbelts surrounding centers

Conservation / Rural

Centers

- -Urban Core
- -Traditional Town Centers
- -Village Centers

General Urban

Suburban

Future Centers

- -Traditional Town Centers
- -Village Centers

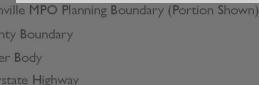
Future General Urban

Future Suburban

Special Use

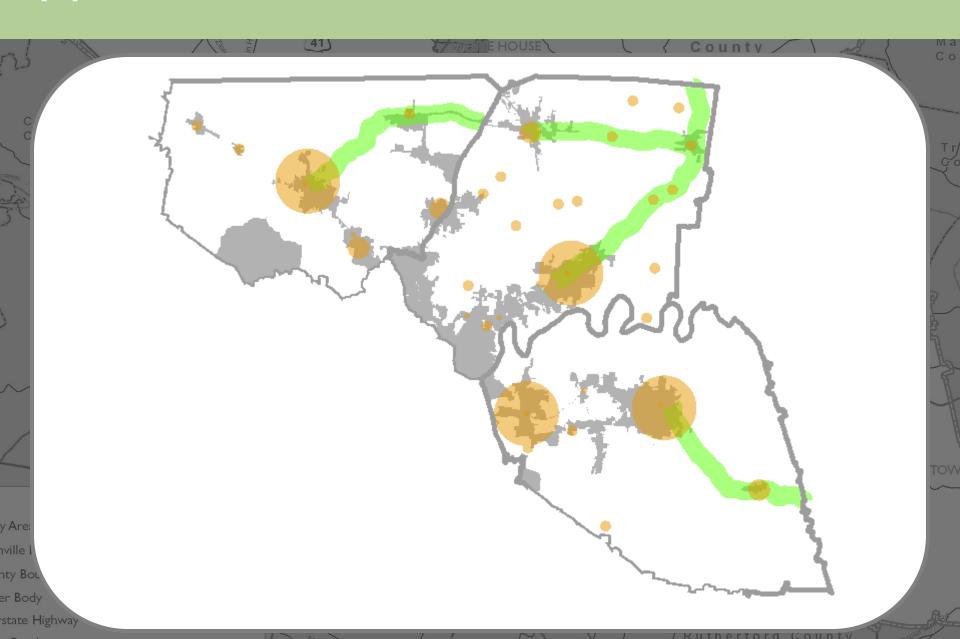
Rutherford County

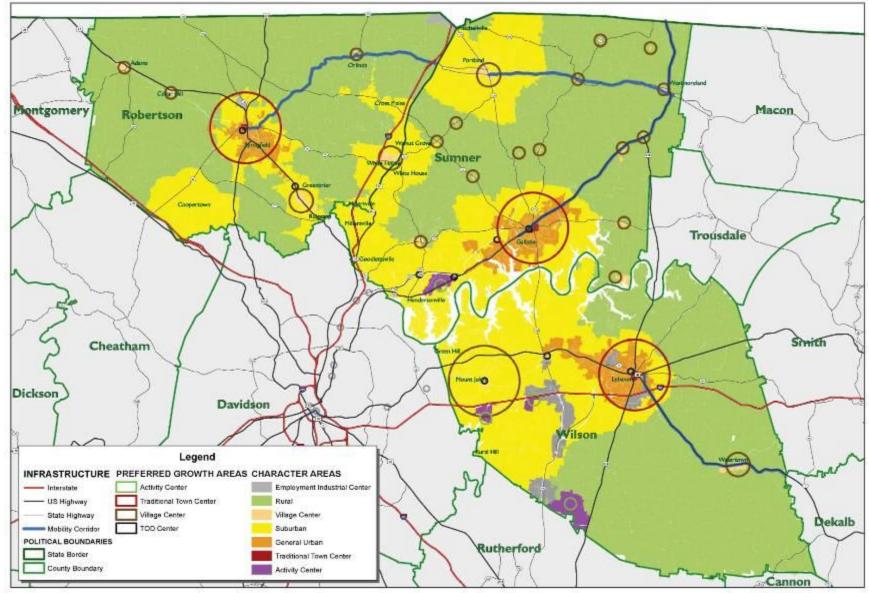
Special Activity Centers





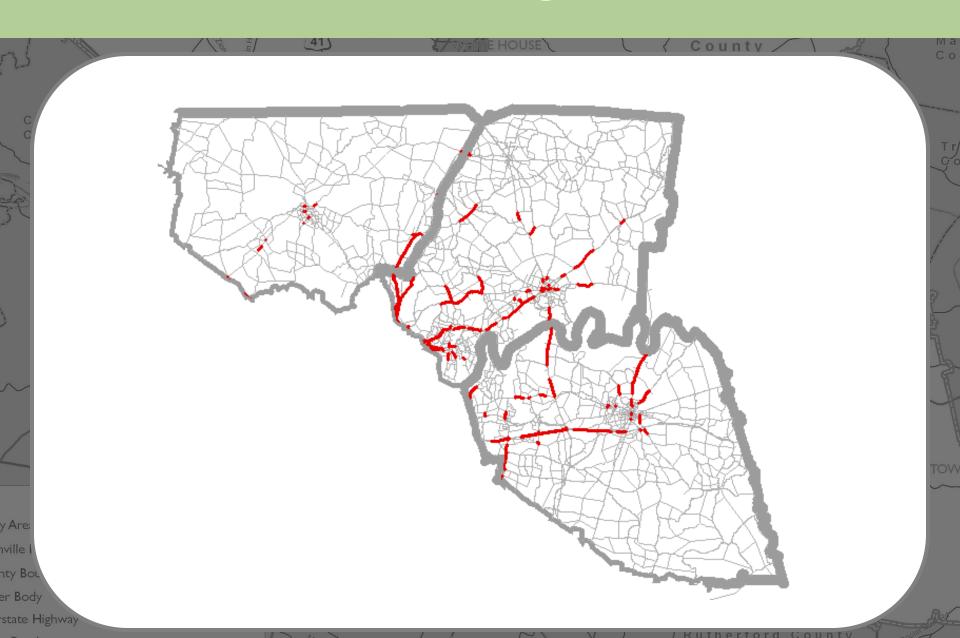
(2) Centers: Preferred Growth Areas



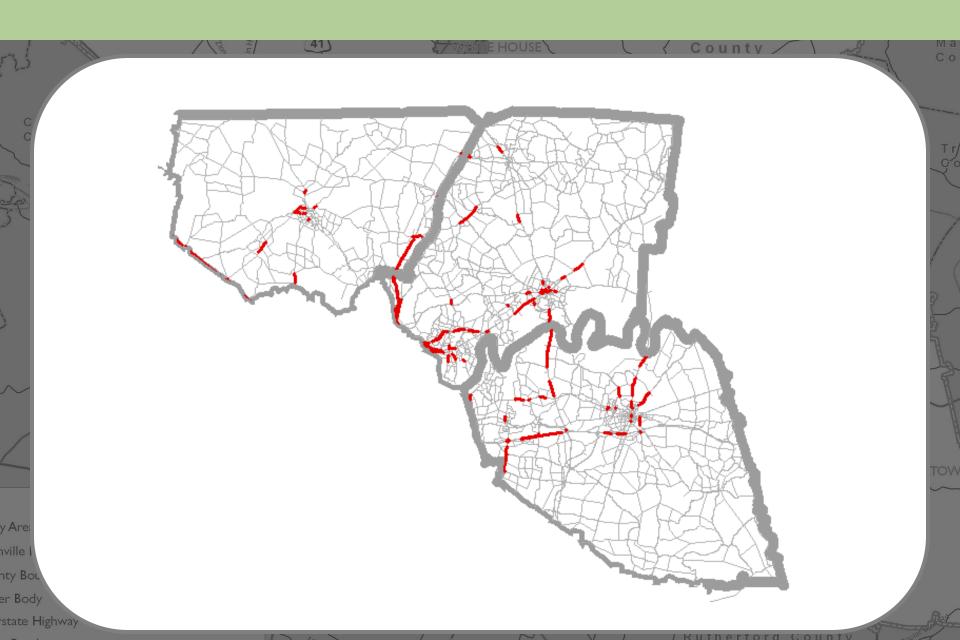




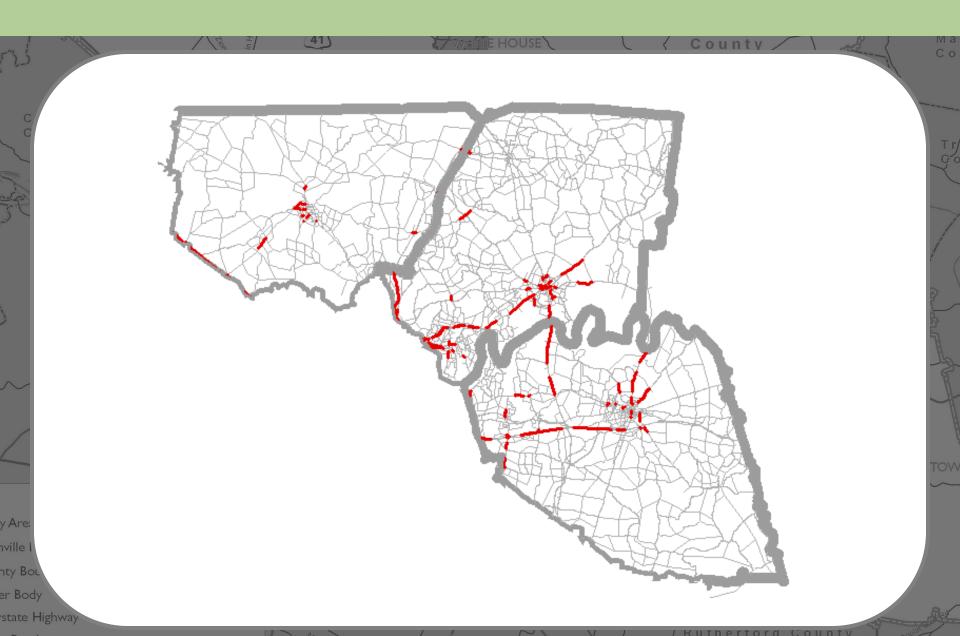
BAU Scenario: 2035 Congestion



(Alt 1) Centers & Corridors: 2035 Congestion



(Alt 2) Centers: 2035 Congestion



Preferred Alternative Scenario

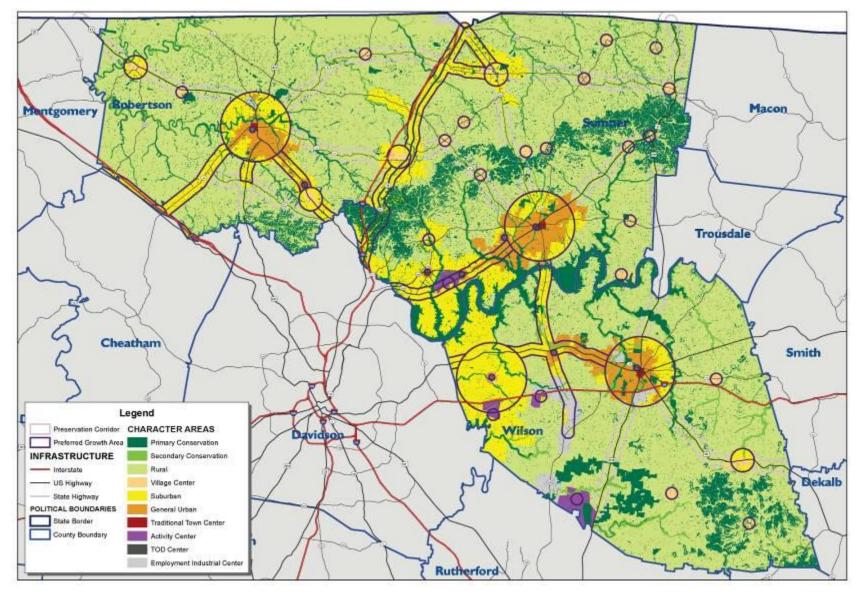


- Builds upon "Centers and Corridors" (Alt. 1)
- Maps 3 Character Areas more than BAU
 - Transit-Oriented Development Center
 - Primary Conservation Area
 - Secondary Conservation Area
- Adjusts Character Areas to reinforce Preferred Growth Areas

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Preferred Alternative Scenario



- Builds upon "Centers and Corridors" (Alt. 1)
- Maps 3 Character Areas more than BAU
 - Transit-Oriented Development Center
 - Primary Conservation Area
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- Adjusts Character Areas to reinforce Preferred Growth Areas

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Focus Areas and Strategic Corridors





Policies and implementation strategies to consider

- Focus Areas (4)
 - 4 conceptual plans
 - Different character areas
 - Different policies

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Focus Areas and Strategic Corridors



Based on Preferred Scenario...

- Strategic Corridors (10 one-mile segments)
 - Represent critical areas of concern and/or locations where changes in land use intensity or traffic appears eminent
 - Variety: cross-sections, land use contexts, geography

Data to KHA to begin field work

paralle MPO Planning Boundary (Portion Shown)

The Boundar Field work scheduled for Dec 1-3

Per Body Report end of December 11 a m s on 1

state Highway



Corridor Recommendations

Number of lanes 6 Median Divided 2030 Daily Volume 2030 Daily Capacity









Proposed Cross Section



Corridor Description and Issues Identified

Two-lane cross section

- New diamond interchange with I-77 (TIP I-4411) to be let on November 2006

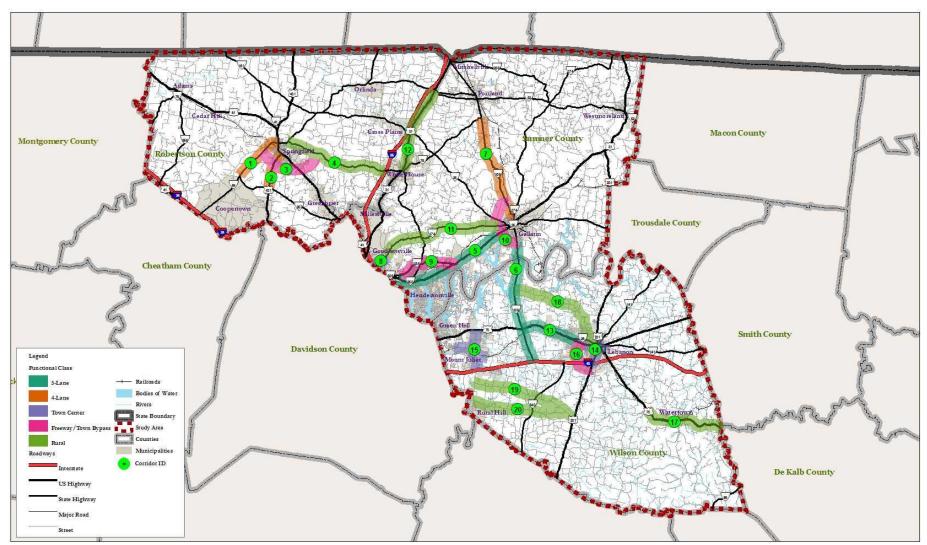
- Signal will be constructed at NC 115 and Langtree Road

Proposed development is expected to cause congestion on this corridor

See Mt. Mourne area plan

Strategic Corridors







Strategic Corridors





- Highlight 2: SR 109 Wilson County

Highlight 3:

Warea Highlight 3:

Wille MPO Planning Bould Sti 41 Greenbrier

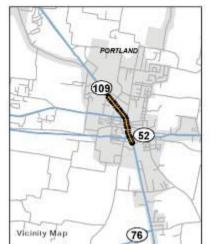
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Williamson County













Corridor Description and Issues Identified

The confider runs from Morningside Drive west to Knight street, covering a distance of 1,12 miles. The comdor's a S-tane segment from West Knight Street to Jackson Road and a 4-tane segment from Jackson Road and a 4-tane segment from Jackson Road to Womingside Drive. The everage annual daily traffic (AADT) was 13,665 vehicles per day (vpd) in 2006. Other characteristics of the condor include heavy truck traffic, poorly defined driveways, and a tack of turn tanes at intersections. All of these characteristics lead to a high number of chashes throughout the condor.





Morningside Drive to W. Knight Street - Wilson County, TN





FIGURE 4.1A: SR 109 (MORNINGSIDE DR. TO W. KNIGHT ST.)







SR 109

Morningside Drive to W. Knight Street - Wilson County, TN

and the remainder of the condor by Section 2.

considerations for bicyclist and podestnars. The segment of read is represented by Section





FIGURE 4.1B: FUTURE SR 109 (MORNINGSIDE DR. TO W. KNIGHT ST.)





2

Legend

Accident Type

- Fatal
- # Injury
- Property Damage Over \$400
- Streets
 - Major Roadways
- 2030 Road Widening
 - Strategic Corridor Limits









Corridor Description and Issues Identified

The conidor runs from Chierokoe Dock Road to Bates Road, covering a distance of 1.22 miles. The control is a 2-faire section with a 2006 average aminal dely traffic (AADI) of 16, (Novahickis per day typd). Other characteristics of the control include:

- 45 mph speed limit.
- rolling topography.
- passing zones throughout the conidor
- straight roadway leading to higher than posted speeds
- no turn lanes at intersections
- heavy truck traffic
- high frequency of crashes, north of this segment.

SR 109

Cherokee Dock Road to Bates Road - Wilson County, 7N





FIGURE 4.2A: SR 109 (CHEROKEE DOCK ROAD TO BATES ROAD)







Corridor Vision

traffic is projected to increase to 38,000 vehicles per day (vpd) in 2035. The vision for the comdor is to preserve the rural and residential character that currently exists, in response to the established vision, the proposed roadway section is a 4-lane median divided roadway.

The proposed section will widen the road to accompdate projected travel demand. Other recommendations include:

- providing a multi-use path along both sides of the road to accompodate pedestrions and cyclets at all still lovels
 maintain dlich and wale approach for stormwater collection to reduce the peak
 - maintain drich and water approach for stormwater collection to reduce the peak flows and improve water quality
- installation of trees or other vegetation where leasible

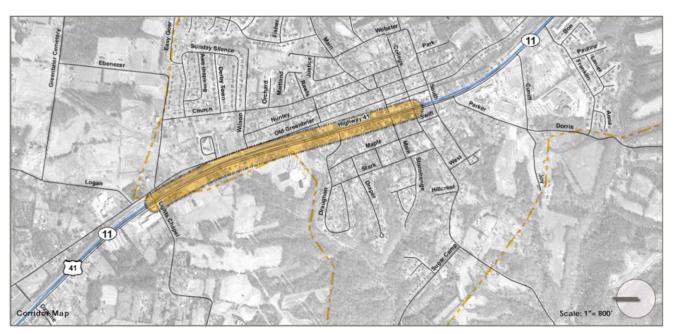
SR 109

Cherokee Dock Road to Bates Road - Wilson County, IN





FIGURE 4.2B: FUTURE SR 109 (CHEROKEE DOCK ROAD TO BATES ROAD)

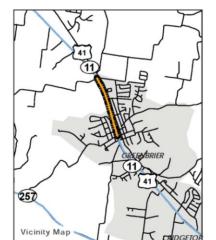




Legend

Accident Type

- Fatal
- Injury
- Property Damage Over \$400
- Streets
- Major Roadways
- 2030 Road Widening
 - Strategic Corridor Limits











Corridor Description and Issues Identified

The corridor runs from Lights Chapel Road to East College Street covering a distance of one mile. The existing section is 5-lanes with curb and gutter. In 2008 the corridor had an average annual daily traffic (AADT) volume of 17,800 vehicles per day. Other corridor characteristics include:

- open driveway cutswide outside shoulders

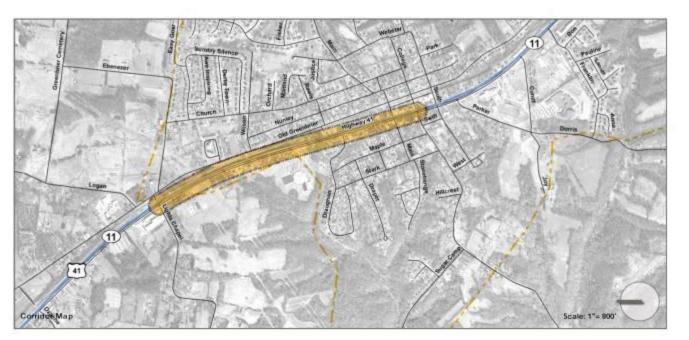
US 41

Lights Chapel Road to East College Street - Robertson County, TN





FIGURE 4.10A: US 41





10

Legend

Major Highways

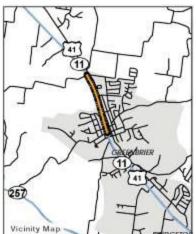
Streets



2030 Road Widening



Strategic Corridor Limits





Corridor Vision

Traffic along the contidor is projected to increase to 26,500 vehicles per day (vpd) by 2035 in order to accompdate increased traffic white promoting better access management and multi-modal accompdations, the following recommendations are proposed:

- creating a 4-lane median divided section with sidewalk on both sides of US 41
- · providing median breaks and turn lanes where warranted
- · providing take lanes for experienced cyclists
- Increasing signage and visibility of the crosswalk adjacent to the school
- Increasing gateway features approaching downtown

US 41

Lights Chapel Road to East College Street - Robertson County, TN





FIGURE 4.10B: FUTURE US 41









Corridor Vision

Traffic along the control is projected to increase to 19.200 vehicles per day (vpd) by 2005, in order to accommodate the projected fraffic volumes and ensure that the readway continues to serve as a primary gateway, the following recommendations are suggested:

- widen roadway to a 4-lane medien divided section.
- Increase gateway features leading into downtown.
- provide sidewalks to enhance pedestran access to commercial development.
- Imit future and existing driveway access to Mt. Juliet Road.
- · consolidate criveways where possible
- provide strategic light and left turn lanes throughout the conidor.
- Include dedicated bike lanes to accompdate cyclists.

Mt. Juliet Road

Central Pike to Pleasant Grove Road - Wilson County, IN



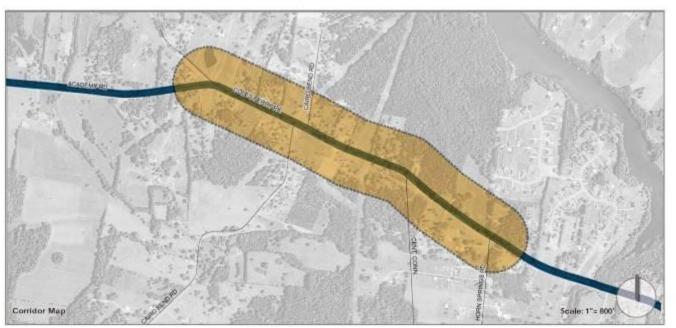


FIGURE 4.3B: FUTURE CENTRAL PIKE TO PLEASANT GROVE ROAD





FIGURE 4.4B: FUTURE HARTMANN DRIVE









Corridor Vision

Traffic 8 projected to increase to 9,800 vehicles per day by 2035 along this segment of the condor. Two travel larnes are sufficient to accommodate projected traffic volumes. This area is anticipated to remain residential in character; therefore, the following recommendations are proposed:

- + provide sidewalks in the vicinity of Friendship Christian School
- . provide uniform sight distance/ visibility throughout the conider with increased
- signage, landscape maintenance, and proper driveway placement.

 Increase gwareness of visibility concerns through the use of rumble strips.
- provide strategic right and left-turn lanes throughout the comdor

Coles Ferry Pike

Academy Road to Horn Springs Road - Wisan County, TN





FIGURE 4.5B: FUTURE COLES FERRY PIKE





6

Legend



Major Highways



2030 Road Widening Streets



Strategic Corridor Limits



New Roadway





Corridor Vision

Traffic along the contdot is projected to increase to 43,900 vehicles per day by 2035 in order to accommodate this traffic, a 44-ane median divided roadway section is proposed. The installation of a raised median will likely radiuce the crash frequency and type that is present in the confider today. A compare streets approach to this confider is crivisomed and is interceed to accommodate the integrated movement of all modes, through the confider. In addition, the following recommendations are also proposed:

- providing sidewalks throughout the entirety of the contidor to access commercial development and the river park
- providing pedestrian signals and high visibility crosswaks at all signalized intersections
- consolidating existing driveways and minimizing future criveways
- Increasing gateway features of the couldor into downtown through the installation of a median
- improving the roadway to a 4-lane median divided roadway to accommodate future traffic volumes
- providing median breaks and dedicated turn lanes where warranted
- including wide outside lanes to accommodate skilled bike idless and public transportation

Gallatin Pike/West Main Street

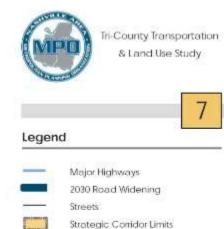
New Shackle Island Ro to Sanders Ferry Rd - Sumner County, TN

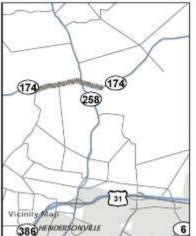




FIGURE 4.6B: FUTURE GALLATIN PIKE/WEST MAIN STREET









Corridor Vision

The confider is adjacent to the Shackie Island focus area located at the northwest quadrant of the intersection of long Hollow Pike and New Hope Road. The projected treffic volume in 2035 along the confider is 13.421 vehicles per day. In response to the projected traffic, widering the readway to create a 4-lane dMded modian with paved shoulder and swele is recommended. Other recommendations include:

- providing for a multi-use path in the vicinity of the elementary, middle, and high schools on both sides of the road.
- · providing for a multi-use parth along the creek parallel to New Hope Road.
- reconstructing the intersection of Center Point Road and Happy Hollow Road to alleviate approach offset and sight distance concerns.
- providing high visibility crosswalks and pedestrian heads at signalized intersections.
- minimizing the flow rate of stommwater and contributing to improved water quality through the use of shoulder and awake sections and a depressed median.

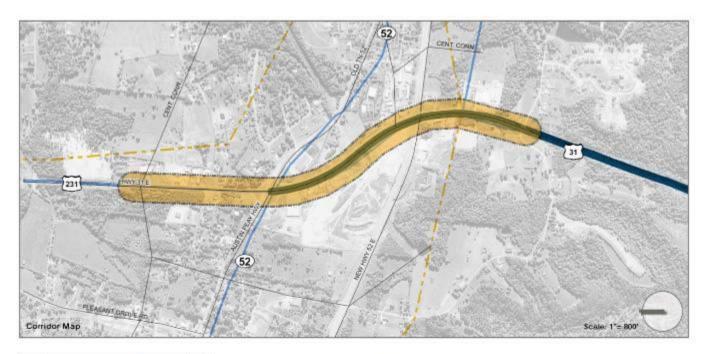
Long Hollow Pike

Center Point Road to Suchanan Circle - Sumner County, TN





FIGURE 4.7B: FUTURE LONG HOLLOW PIKE





8

Legend

Major Highways

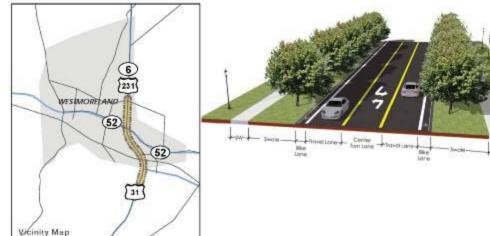
Streets



2030 Road Widening



Strategic Confidor Limits



Carridor Vision

The overall confider is occured in a relatively turn area, but the strategic conficer segment falls within a focus area representing a potential village center at the Hwy \$2 intersection. In the projectical 2035 volumes very greatly along the confider between \$300 and 19,000 vehicles per day (ppd). Within the village center, a 3-fane cross section is recommended. In an effort to create a sense of antival and corresponding change in diver behavior, a number of design almost area proposed including the accilion of selevivals, pediatrian scale lighting, and bids larves and street frees. In addition, a posted speed limit the, doesn't exceed 35 mph through any future village central is recommended. Additional markety capacity may be required in locations where greater travel domand is anticipated (major mersections and segment of readways with higher itaffic volumes). Other recommendations include:

- providing a center turn-lane to improve access to adjacent proporties.
- removing the right-turn slip tenes at the Austin Perry Fighway intersection at West 31E.
- signalizing intersection of US 31E at Austin Peay Highway upon meeting signal warrants
- providing pedestrian signal heads and high visits ity crosswales at signalized intersections

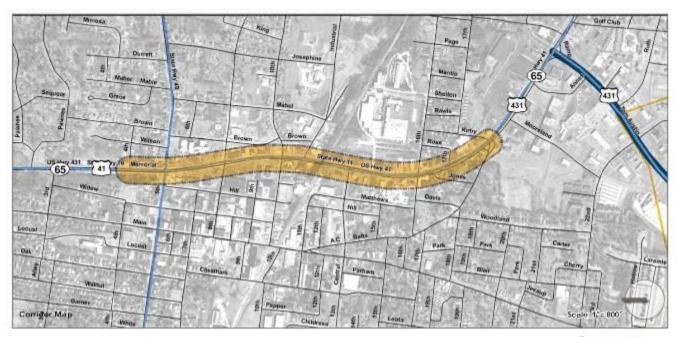
US 31 E (Westmoreland)

Epperson Springs Road to Clyde Wix Road - Sumner County, TN





FIGURE 4.8B: FUTURE US 31 EAST





Legend

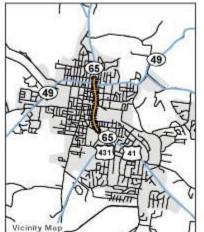
Major Highways

Streets

2030 Road Widening



Strategic Corridor Limits





Corridor Vision

This conidor is located in a traditional town center character area and is also within a designated focus area that communicates potential infil and redevelopment opportunities in the vicinity of the Springfield downtown. The projected 2035 traffic volume is 25,860 vehicles. per day (vpd). The mediway is effectively the eastern boundary of the downrown and should be designed with this context in mind. In addition, this segment of roadway may play a role in providing an alternate north-south route for bucks through the downtown (in conjunction with Central Avenue) as opposed to using 5th Avenue. When considering the context of the area, proximity of downtown, and potential for future infill and redevelopment, the following improvements are propored.

- install à madièn along Memorial Blvd to provide access management and to enhance gateway feetures into downtown
- sign Memorial Blvd as a truck route from the intersection around 5th Avenue to Central Average
- restrict truck access except by permit along West 5th Ave. between Memorial Blwd. and Central Ava. Wast
- reconstruct the Baits Blvd approach to Memoral Blvd by removing the channelizing stands provide median breaks and turn lanes where warranted
- include tike lanes and sidewaks.

Memorial Boulevard

East 4th Avenue to Batts Boulevard - Robertson County, TN





FIGURE 4.9B: FUTURE MEMORIAL BLVD.

Development Form Focus Areas



- Each of 4 Focus Areas takes a Strategic
 Corridor into greater depth
- Focus Area conceptually links transportation planning to land-use planning through design and form
- Highlighting 2 of 4:
 - Hartmann Drive at West Main St., Lebanon
 - Memorial Drive and Main St., Springfield

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FIGURE 4.11C: FOCUS AREA LEBANON AT HARTMANN DRIVE





FIGURE 4.12A: FOCUS AREA SPRINGFIELD AT MEMORIAL BLVD.





FIGURE 4.12B: FOCUS AREA SPRINGFIELD AT MEMORIAL BLVD.





FIGURE 4.12C: FOCUS AREA SPRINGFIELD AT MEMORIAL BLVD.





FIGURE 4.13A: FOCUS AREA WESTMORELAND AT US 31

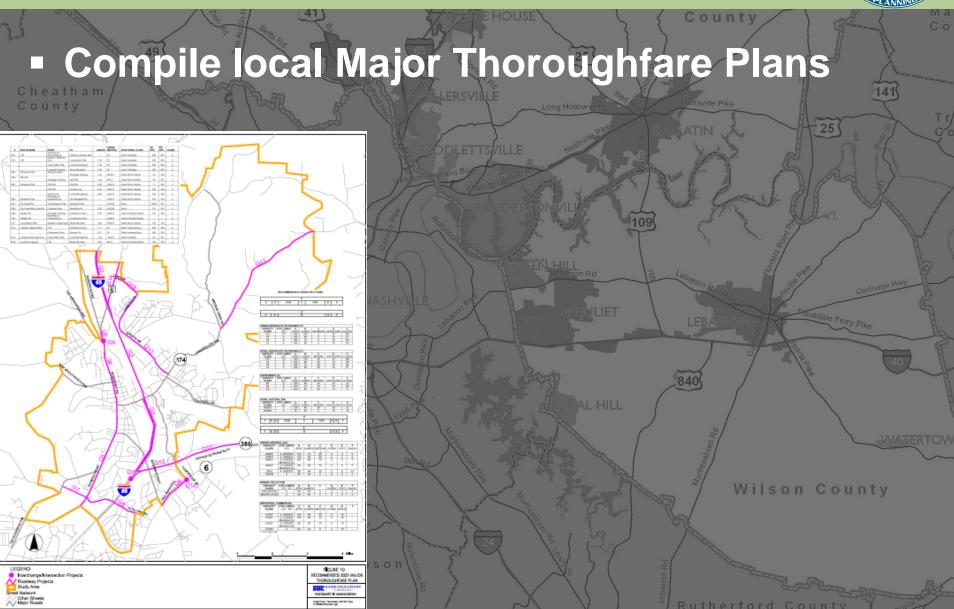






Conceptual Network

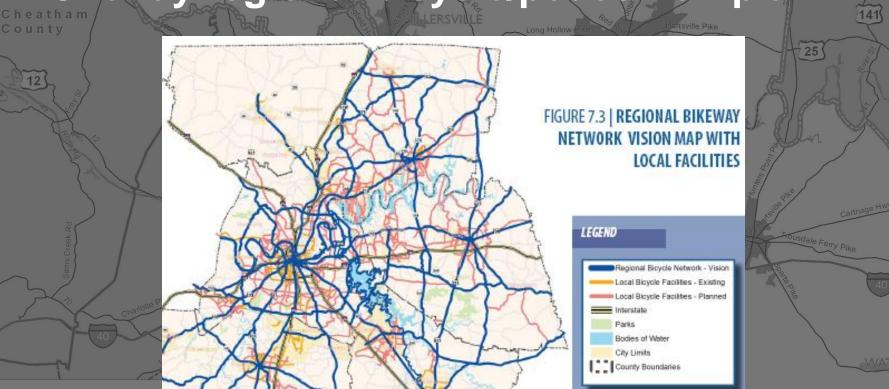




Conceptual Network







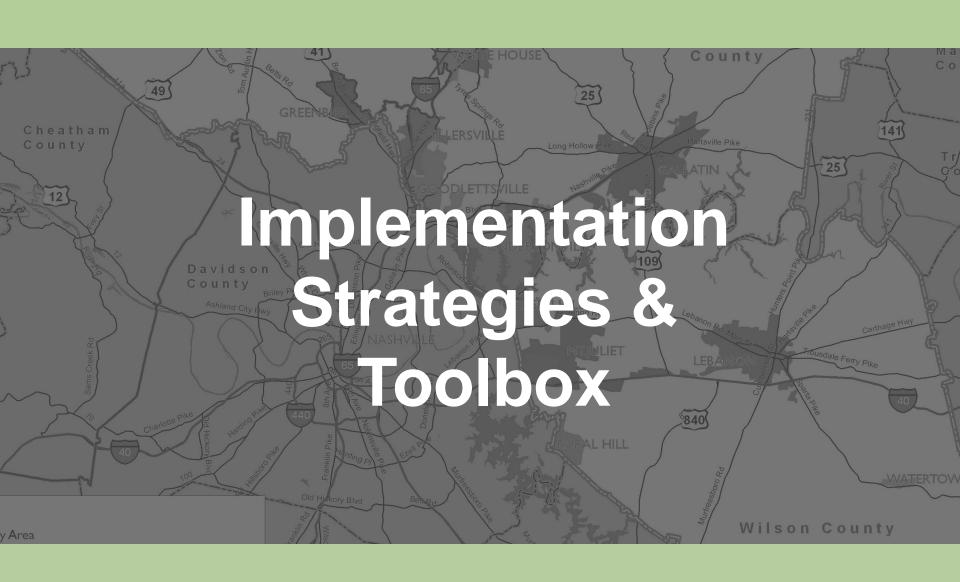
Create conceptual multi-modal network that

weaves counties together.

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Increase Travel Choices

Invest in multiple modes.

state Highway

Direct investment to Preferred Growth Areas, where land uses are more varied and development more compact.

Plan and Implement Regional Transit System

- Employ Preferred Alternative regional growth scenario for guidance on mass transit routes and stations.
- Support transit with mixed-use, transit-oriented development.
- Consider tax increment financing districts around station locations to supplement funding.

Improve Project Prioritization

- Implement scoring system for projects for ranking.
 - Metrics like level-of-service should support an objective within the scoring system.



Reinforce "Fix It First" Policy

nty Boundary

- Invest in Preferred Growth Areas, where network is more developed.
 - Utilize "asset management" to assign value to infrastructure and prioritize and schedule repairs and upgrades accordingly.
- Align Major Thoroughfare Plans and Regional LRTP with Preferred Alternative
 - Use Conceptual Regional Transportation Network for guidance to improve linkages between jurisdictions.
- Prepare Tri-County Collector Street Plan
 - Encourage traditional neighborhood design (TND), which includes better road network connectivity.
 - Require transportation impact analyses to determine extent of facility improvements needed in proposed development.



Advance Context-Sensitive Solutions

- Utilize "Rural Resource Guide" (LU recommendation) to improve transportation project compatibility with natural resources.
- Develop Thoroughfare Design Guidelines
 - Use Character Areas as guidance for design speed of facility and its intersections.
- Initiate "Complete Streets" Program
 - Dedicate a portion of funding for roadways to a program to improve facilities to benefit all users by funding crosswalks, onstreet parking, raised medians, and similar improvements.

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Regional Land-Use Planning



- Convene Regional Land Use Coordination Committees

- Utilize current partner, Civic Design Center to assist with voluntary review of "Developments of Regional Impact."
- Convene stakeholders such as Cumberland Region Tomorrow to establish a forum for feedback to local governments preparing corridor plans, small-area plans, etc.
- Lead and Encourage Rural and Agricultural
 Conservation Initiatives
 - Prepare Tri-County Rural Resource Guide to flesh out Secondary Conservation Areas.
 - Detail good planning strategies for rural areas, such as "transfer of development rights," conservation easements, etc.
 - Identify state programs and funding sources available to local governments (e.g., Agricultural Producer Association Grants).

Regional Land-Use Planning



Reinforce Preferred Growth Areas

 Invest in all transportation modes in centers and corridors identified in the Preferred Alternative Scenario.

Encourage Housing Options

- Provide multiple modes of transportation to link existing and proposed centers to connect residents of attached housing to jobs.
- Encourage location-efficient mortgages.

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Local Transportation Planning



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- Make Corridor Planning Standard Operating Procedure

- Utilize Regional Land Use Coordination Committee as resource.
- Corridor plan should derive from local comprehensive plan and support its future land use map.
- Access management strategies tailored to the corridor plan's goals should be the first implementation strategy in place.
- Employ the MPO's Context-Sensitive Solutions and Thoroughfare Design Guidelines for corridor plan recommendations.
- Consider Strategic Corridors and Development Form Focus
 Areas for guidance to link transportation and land-use planning.

Manage Parking Supply

Adjust parking standards by Character Area.

Incorporate parking into local comprehensive transportation plans, for parking spaces are the endpoints of a majority of trips.

Local Transportation Planning



Implement Complete Streets

- Tap MPO's (proposed) Complete Streets program for funding.
 - Match regional funds with tax-increment financing, metered parking, tree bank monies (for planted medians), and other dedicated sources.

Update Local Major Thoroughfare Plans

- Utilize Preferred Alternative Scenario and Conceptual Regional Transportation Network to guide updates.
- Integrate guidance for Context-Sensitive Solutions,
 Thoroughfare Design Guidelines, and Complete Streets principles.

Integrate Regional Bike/Ped Plan

Local comprehensive transportation plans should identify
 potential users, their skill level, and facility type appropriate to
 their use for each route identified in the regional plan.

Local Land-Use Planning



Wilson County

- Create and Update Local Planning in Accordance with Preferred Alternative Scenario
 - Comprehensive plans
 - Comprehensive transportation plans
 - Open space, parks, recreation, and greenways plans
 - Small-area plans
 - Capital improvements programs
 - Affordable housing programs
 - Reinforce Preferred Growth Areas
 - Urban growth boundaries
 - Mixed uses

- Infill development
 - Revitalization plans

Local Land-Use Planning



Increase housing options

- Inclusionary zoning
 - Density and intensity bonuses
 - Form-based coding
 - Traditional neighborhood development ordinances

Support Rural Conservation

- Voluntary agriculture districts
- Local agriculture programs: "slow food" and farmers markets
- Agriculture conservation easements (finite or permanent)
- Employ Tri-County Rural Resource Guide
- Zone and tax agriculture by current use

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Local Land-Use Planning





- Participate in Regional Land Use Coordination Committees.
- Partner with adjacent jurisdictions for small-area plans and corridor plans that abut or straddle boundaries.
- Work with neighbors to prepare Major Thoroughfare Plans.

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Next Steps

state Highway



- Prepare Conceptual Regional Transportation Network Revise Study Report per Today's Input Finalize Recommendations and Report Wilson County nville MPO Planning Boundary (Portion Shown) nty Boundary